WHAT IS CLAIMED IS:

1. A portable information device comprising:

an RFID for making communication using a magnetic field;

a battery receiving section;

a magnetic material sheet;

an antenna coil of the RFID; and

an IC and condensers for resonance connected to the antenna coil;

wherein the antenna coil of the RFID is arranged on a side of a battery cover for the battery in the battery receiving section, and

the magnetic material sheet arranged between the antenna coil and the battery within the battery receiving section.

2. A portable information device according to claim 1, wherein the antenna coil of the RFID has an intermediate tap, the condensers for resonance are connected to both ends of the antenna coil, and the IC is connected to the middle between one of the ends of the antenna coil and the intermediate tap.

3. A portable information device according to claim 2, wherein the intermediate tap is an intermediate tap the number of turns of which is from 1/3 to 1/5 of the total number of turns of the antenna coil.

4. A portable information device according to claim 1, wherein the magnetic material sheet has an initial permeability of 10 or more and a thickness of 0.1 mm or more and 1.0 mm or less.

5. A portable information device according to claim 2, wherein the magnetic material sheet has an initial permeability of 10 or more and a thickness of 0.1 mm or more and 1.0 mm or less.

6. A portable information device according to claim 3, wherein the magnetic material sheet has an initial permeability of 10 or more and a thickness of 0.1 mm or more and 1.0 mm or less.

7. A portable information device according to claim 1, further having a metal foil or a metal vacuum-evaporation film between the magnetic material sheet and the battery.

8. A portable information device according to claim 2, further having a metal foil or a metal vacuum-evaporation film between the magnetic material sheet and the battery.

9. A portable information device according to claim 3, further having a metal foil or a metal vacuum-evaporation film between the magnetic material sheet and the battery.

10. A portable information device according to claim 4, further having a metal foil or a metal vacuum-evaporation

film between the magnetic material sheet and the battery.

11. A portable information device according to claim 1, further comprising an IC card, for both of contact and non-contact uses, which is connected to the antenna coil through a flexible substrate and a connector and is mounted on a position different from the position of the antenna coil.

12. A portable information device according to claim 2, further comprising an IC card, for both of contact and non-contact uses, which is connected to the antenna coil through a flexible substrate and a connector and is mounted on a position different from the position of the antenna coil.

13. A portable information device according to claim 3, further comprising an IC card, for both of contact and non-contact uses, which is connected to the antenna coil through a flexible substrate and a connector and is mounted on a position different from the position of the antenna coil.

14. A portable information device according to claim 4, further comprising an IC card, for both of contact and non-contact uses, which is connected to the antenna coil through a flexible substrate and a connector and is mounted on a position different from the position of the antenna

coil.

15. A portable information device according to claim 5, further comprising an IC card, for both of contact and non-contact uses, which is connected to the antenna coil through a flexible substrate and a connector and is mounted on a position different from the position of the antenna coil.

16. A portable information device according to claim 1, wherein no metal vacuum-evaporation film or conductive material coating is applied to any member of the battery receiving section and the battery cover.

17. A portable information device according to claim 2, wherein no metal vacuum-evaporation film or conductive material coating is applied to any member of the battery receiving section and the battery cover.

18. A portable information device according to claim 3, wherein no metal vacuum-evaporation film or conductive material coating is applied to any member of the battery receiving section and the battery cover.

19. A portable information device according to claim 4, wherein no metal vacuum-evaporation film or conductive material coating is applied to any member of the battery receiving section and the battery cover.

20. A portable information device according to claim 5, wherein no metal vacuum-evaporation film or conductive material coating is applied to any member of the battery receiving section and the battery cover.